

## **Abstract**

A power-saving method for an optical navigation device is proposed, wherein the image capture frame rate of a sensor is controlled according to the moving speed of the optical navigation device. The image capture frame rate is  
5 determined based on the variations of a horizontal displacement and a vertical displacement of the optical navigation device for saving power. Moreover, when the optical navigation device is in the sleeping mode, it is not necessary to generate a current to drive the sensor to monitor whether the optical navigation device moves or not. A displacement detector (e.g., a mechanical  
10 displacement trigger) is used instead to generate a current for breaking off the sleeping mode to accomplish the power-saving object.